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TITLE: MANUFACTURE OF IMPERMEABLE MOLDED CARBON BODY

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ABSTRACT:

PURPOSE: To manufacture a molded carbon body having superior gas and liq. impermeability by extrusion-molding a kneaded composition contg. a thermosetting resin into a flat plate, rolling the plate with rolls, drying and curing it, and carrying out carbonization and calcination in a nonoxidizing atmosphere.

CONSTITUTION: A kneaded composition is prepd. by kneading a soln. of a thermosetting resin such as phenolic resin, xylene resin or melamine resin with 100 pts.wt. powder of a thermosetting resin such as phenolic resin having $\leq 50\mu\text{m}$ particle size, ≤ 50 pts.wt. carbon powder such as graphite powder and 1~20pts.wt. org. thickener such as methylcellulose. The kneaded composition is extruded into a plate with a plunger extruder or the like, and the plate is rolled to a prescribed thickness with rolls. It is dried to evaporate the solvent in the thermosetting resin soln., and calcination is carried out at 1,000~1,500°C in a nonoxidizing atmosphere such as He or Ar to obtain a carbon sheet having superior gas and liq. impermeability and suitable for use as a separating plate for a fuel cell contg. phosphoric acid.

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